We claim:

1. A system for automatic context management for testing, monitoring and automating network applications, comprising network applications with client side code execution, said system comprising:

a testing, monitoring, or automating tool;

a context-full API for a replay engine of said tool; and

a recorder capable of recording at least one context-full test script;

said replay engine being capable of executing said context-full test script.

2. The system according to claim 1, wherein said context-full API is based on a page-level API.

3. The system according to claim 2, wherein said context-full page-level API comprises an extensible document parser for determining at least one parser extension.

4. The system according to claim 3, wherein said at least one parser extension includes a replay instruction specifying at least one parser addition and parameters for said parser addition.

5. The system according to claim 3, wherein said parser addition includes a plug-in module for said extensible document parser.

6. The system according to claim 3, wherein said extensible document parser is capable of

being extended with at least one parser extension.

7. The system according to claim 4, wherein said parser addition for said parser extension is selected from a library of parser additions.

8. The system according to claim 7, wherein each of said parser additions of said library of parser additions implements a specific parsing algorithm.

9. The system according to claim 8, wherein said parser addition of said library of parser additions implements an algorithm for parsing hyperlinks from a HTML document.

10. The system according to claim 8, wherein said parser addition of said library of parser additions implements an algorithm for parsing forms from a HTML document.

11. The system according to claim 8, wherein said parser addition of said library of parser additions implements an algorithm for parsing embedded documents from a HTML document.

12. The system according to claim 9, wherein said algorithm parses hyperlinks by searching text between a left and a right boundary string.

13. The system according to claim 2, wherein said context-full API comprises form merging replay instructions.

14. The system according to claim 13, wherein said form merging instructions comprise:

a reference to a form in a previously downloaded web page, said form in said previously downloaded web page being an HTML form;

a reference to a form in said test script, said form in said test script being a script form; and

instructions for merging said HTML form and said script form to produce a form to be submitted.

15. The system according to claim 14, wherein:

said instructions for merging said HTML form and said script form comprise merging instructions for each individual form field of said HTML form and said script form;

said merging instructions for each said individual form field comprising one member of the group consisting of:

an instruction to send a form field value obtained from said HTML form;

an instruction to send a form field value specified in said script form; and

an instruction to not send one of said form fields;

16. The system according to claim 15, wherein said merging instructions comprise an instruction to use an action URL in said test script instead of an action URL obtained from said HTML form for said form to be submitted.

17. The system according to claim 1, wherein said recorder records a page-level test script comprising parser extensions and form merging instructions.

18. The system according to claim 17, wherein said recorder keeps track of a session history by building representations of all web pages downloaded so far during a recording session.

19. The system according to claim 17, wherein:

said context-full API is based on a page-level API;

said context-full page-level API comprises an extensible document parser;

said recorder uses said extensible document parser for parsing at least one HTML document.

20. The system according to claim 17, wherein said recorder automatically detects which of said parser extensions and said form merging instructions are needed in order to record a test script which will correctly use dynamic information during a script replay.

21. The system according to claim 20, wherein said recorder detects the need for recording at least one of said parser extensions by detecting that a context-less replay instruction is to be recorded otherwise.

22. The system according to claim 20, wherein:

said context-full page-level API comprises an extensible document parser;

said extensible document parser comprises at least one parser extension which is a replay instruction specifying at least one parser addition and parameters for said parser addition;

said parser addition for said parser extension can be chosen from a library of parser additions;

each of said parser additions of said library of parser additions implements a specific parsing algorithm; and

said recorder detects which one of said parser extensions is to be recorded by querying each of said parser additions for suitable parameters.

23. The system according to claim 1, wherein said recorder records form merging instructions by performing fuzzy form detection.

24. The system according to claim 23, wherein said recorder performs fuzzy form detection by comparing a form being submitted to all forms in a session history, choosing a form from said session history which is most similar to said form being submitted; and recording said form merging instructions so that said recorded form merging instructions applied to said form chosen from said session history result in a form identical to said form being submitted.

25. The system according to claim 1, wherein said replay engine executes said test script, said test script comprising parser extensions and form merging instructions.

26. The system according to claim 25, wherein said replay engine keeps track of a session history by building representations of all web pages downloaded so far during a replaying session.

27. The system according to claim 25, wherein:

said context-full API is based on a page-level API;

said context-full page-level API comprises an extensible document parser; and

said replay engine uses said extensible document parser for parsing at least one HTML document.

28. A method of fuzzy form detection, said method comprising the steps of:

comparing a form being submitted to forms in a session history;

choosing a form from said session history which is similar to said form being submitted;

recording form merging instructions to said form chosen from said session history so that a resulting form is substantially identical to said form being submitted.

29. A device for automatic context management for testing, monitoring and automating network applications, comprising network applications with client side code execution, said device comprising:

a processor; and

a memory storing processing instructions for controlling the processor, the processor operative with the processing instructions to:

record at least one context-full test script; and

execute said context-full test script using a context-full API for a replay engine of a testing, monitoring, or automating tool.

30. A device for automatic context management for testing, monitoring and automating network applications, comprising network applications with client side code execution, said device comprising:

a processor; and

a memory storing processing instructions for controlling the processor, the processor operative with the processing instructions to:

record at least one context-full test script;

determine at least one parser extension using an extensible document parser of a context-full page-level API for a replay engine of a testing, monitoring, or automating tool;

include a replay instruction specifying at least one parser addition and parameters for said parser addition in said at least one parser extension;

select said parser addition for said parser extension from a library of parser additions;

implement a specific parsing algorithm using each of said parser additions of said library of parser additions;

implement an algorithm for parsing hyperlinks from a HTML document using said parser addition of said library of parser additions;

parse hyperlinks by searching text between a left and a right boundary string using said algorithm; and

execute said context-full test script using said context-full page-level API for said replay engine.

31. A device for automatic context management for testing, monitoring and automating network applications, comprising network applications with client side code execution, said device comprising:

a processor; and

a memory storing processing instructions for controlling the processor, the processor operative with the processing instructions to:

record at least one context-full test script;

generate form merging replay instructions in a context-full page-level API for a replay engine of a testing, monitoring, or automating tool, said form merging instructions comprising: a reference to a form in a previously downloaded web page, said form in said previously downloaded web page being an HTML form; a reference to a form in said test script, said form in said test script being a script form; and instructions for merging said HTML form and said script form to produce a form to be submitted; and

execute said context-full test script using said context-full page-level API for said replay engine.